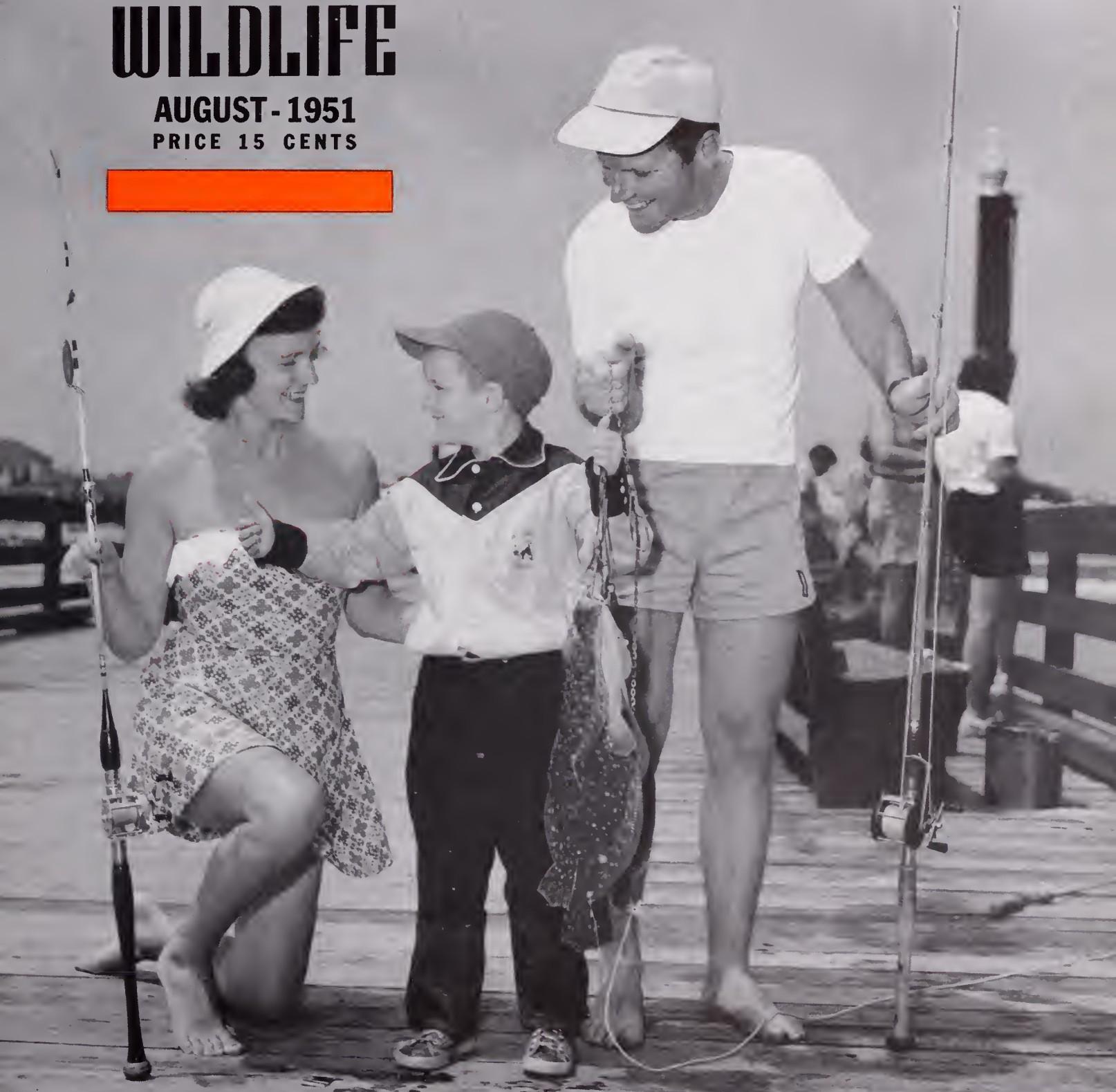


VIRGINIA WILDLIFE

AUGUST - 1951

PRICE 15 CENTS



VOLUME XII

NUMBER 8



Commission photo by L. G. Kesteloo

CAMOUFLAGE AT ITS BEST. Here is a perfect example of how Nature conceals her kind from enemies in the wild. The "protective coloration" of this CHUCK-WILL'S-WIDOW is short of a miracle.

Virginia WILDLIFE

Published by VIRGINIA COMMISSION OF GAME AND INLAND FISHERIES, Richmond 13, Virginia
A Monthly Magazine for Higher Standards of Outdoor Recreation Through Wildlife Conservation

COMMONWEALTH OF VIRGINIA

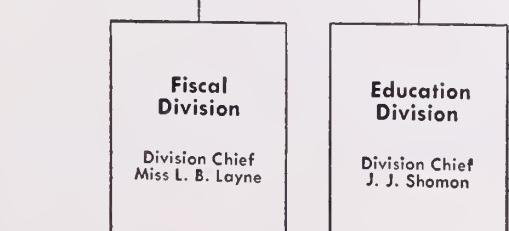
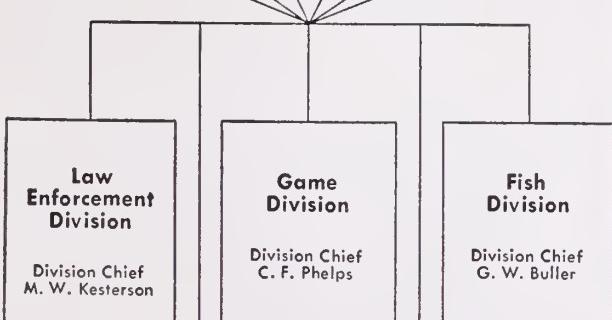


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VOLUME XII

AUGUST, 1951

NUMBER 8

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Cover Photo

Our new cover format shows a happy family after a successful flounder fishing trip. We hope our readers will like the change of pace and the larger picture cover.

Photo by Flournoy, V.S.C.C.

VIRGINIA WILDLIFE gratefully receives for consideration all news items, articles, photographs, sketches and other materials which deal with the use, management and study of Virginia's interrelated, renewable natural resources:

WILDLIFE

SOILS — CONSERVE — WATER

FORESTS

Since wildlife is a beneficiary of the work done by State and Federal land-use agencies in Virginia, editorial policy provides for recognition of their accomplishments and solicitation of their contributions. Credit is given on material published. Permission to reprint is granted provided proper credit is given.

SUBSCRIPTIONS: One Year, \$1.00; two years, \$1.50; three years, \$2.00. Remittances by check or money order to be made payable to the Treasurer of Virginia. Local game wardens will accept subscriptions or they may be forwarded direct to Commission of Game and Inland Fisheries, 7 North Second Street, P. O. Box 1642, Richmond 13, Virginia.

Entered as second class mail matter November 10, 1947, at the Post Office at Richmond, Virginia, under the Act of August 24, 1912.

Let's put the emphasis on RESTORATION

By I. T. Quinn



To have more game we must put the emphasis on habitat restoration.

The great future of Virginia's wildlife lies in the re-examination of our conservation philosophy—a program geared to the full development of and the restoration of our basic resources.

(Game Commission staff photos)

AN EVOLUTION is taking place in Virginia's game situation. Progress of aggressive new methods in game management is no less remarkable than the widespread change in attitude of land-owners and sportsmen.

No longer is the objective simply to save the remnants of dwindling wildlife resources. The present crusade is aimed at developing the state's tremendous game potentials and multiplying the populations of all species far beyond their existing numbers. Many observers both inside and outside the state have remarked that Virginia should become the greatest hunting state east of the Mississippi.

Possibilities are evident from a glance at a map. In the mild and kindly climate we have, with only about 19 percent of the land area in cultivation, more than 20 percent in submarginal areas, and the large majority of the state's acres in woodlands, it is perfectly clear that the Old Dominion should become a paradise for many varieties of preferred

native game birds and animals if intelligent effort is directed toward making this come true.

The idea that game can be restored overnight by artificial means is a thing of the past. While re-establishment of brood stocks in areas where game has been exterminated still justifies artificial propagation, there is no use in releasing pen-raised game in any area unless congenial habitat already exists or is created.

The major problem which is being attacked in Virginia is the re-creation of habitat for game which has been destroyed. The basic facts in the life of a rabbit, or of man himself, are that each must have a safe home in which to bear and rear young, that there must be protection from all sorts of enemies, including the inclemency of weather, and each must have adequate food 365 days in the year.

Over-shooting, either legally or illegally, is more and more of a problem, with the constantly-increasing numbers of hunters equipped with better

facilities than ever before. In view of that problem, law enforcement is being rapidly strengthened. Also it is necessary to use the scientific approach in setting regulations aimed to allow hunters to take only the annual surplus.

But the big factor in game shortages—especially small upland game—is the deplorable contraction of habitat in which such game can survive. Undoubtedly the greatest strides which are being made are in the restoration of as much food and cover on privately-owned as well as public lands as possible, and the creation through land-use of more food and cover than the birds and animals have hitherto known. The stark fact is that lands, under old agricultural practices, are not producing enough for game to live on.

A few years ago, this approach to the continuing production of more abundant game throughout the state would have been regarded by many as visionary and impossible. But a dozen years ago, no one would have dreamed of the great work which is being done all over Virginia by the Soil Conservation Districts in restoring to fertility fields which were well-nigh barren from erosion. Even now, many fail to grasp what has been done in a few brief years in cleaning up pollution in the streams and restoring forest lands to continuing

Providing more plant foods for game involves hard work, as can be seen by these youngsters who are pulling and packaging bicolor lespedeza at a nursery.



productivity.

The production of more abundant game supplies through habitat improvement is a campaign which is being just as vigorously waged as any of the others of these great movements which are destined to play their part in making the Virginia of the future a more prosperous and happier land for her citizens. After more than three centuries of tearing down, an era has dawned in which determined efforts are being made to build back.

With the vast majority of Virginia's lands in private hands, one important project is to bring game to the farms. With more than 1,000,000 acres of farms permanently supplied with more game food to carry birds and animals through the critical months of late winter and early spring during the past two years, a steady march toward attaining the goal, as set forth in the Commission's long range program, is being successfully accomplished. The fact that so many acres remain untouched is simply a challenge in the ever-widening campaign to improve game habitat all over the state.

The overall effort promises a very revealing picture which is already unfolding before the eyes of Virginia's sportsmen. The fact that there can be a far greater abundance of game is easy to visualize.

(Continued on page 10)

The end, however, justifies the means. Here is a remarkable stand of bicolor, overflowing with seed and ready to feed quail during the critical winter.





BREAM

Prince of Panfish

By DR. E. C. NETTLES

(Commission photos by L. G. Kesteloo)

VIRGINIA ANGLERS who consistently seek utmost fishing enjoyment, a nice mess of table

fish, and a good creel, will find nothing better than angling for the prince of panfish—the bluegill bream.

Talk to fishermen anywhere and ask about the sport of panfishing and almost everyone will agree that for downright scrap and delicious eating none can beat the bluegill. So just as the black bass is labeled number one king of American fresh water game fishes, this little fellow can be classed "tops" among the sunfishes.

Almost every disciple of Izaak Walton recalls his early boyhood days when a trip to the local pond or the "ol' fishin' hole" produced a nice mess of bream. But fishing for this bantamweight of the fish family is hardly restricted to youngsters. More adults go in for this scrappy little tussler than any other fish.

Catching the bream is no great science, for he will smash at a dangling worm as well as at a popping bug. When he's hungry he'll bite anything that

even faintly resembles food.

There are times, however, when he's just plain "finicky." No amount of persuasion will make him strike. When that happens, you might as well fold up your tackle and try again another day. He's just on strike.

The bluegill bream is perhaps the best known of the sunfishes in Virginia. While easy to confuse with a number of other sunfish species, it can be identified by its dark greenish back and orange to yellow undersides. The bone under the "ear flap" on the back of the gill cover extends to the margin of the flap or nearly there.

Generally speaking, the bluegill bream is at home in the same waters as the largemouth bass, and the two get along well together. Bream are mostly insectivorous, destroy comparatively few bass fry, and breed rapidly. They love to hang around stumps, brush heaps, lily pads, docks, sunken logs, boat landings, weed beds, or around any deep hole where they know there is a chance for food.

Bream have been caught in Virginia weighing upwards of a pound and a half, but the average is about a half pound. By the fisherman's thumb rule a bream that goes 6 or 8 inches is a "good one," and a 10-incher is a "dandy."

A few well-managed Virginia ponds consistently produce lunkers. Custis Pond in King William County has always been known as a good "bream pond." In Sussex County, the Commission-controlled Airfield Pond has yielded some nice fish. Chickahominy Lake is another fine bream spot, and many Richmonders make this lake their regular hangout during the spring and fall when bream are hitting strong.

No matter from what water the bluegill comes, you can be sure he'll make a delicious table fish. The flesh is firm, delicate, flavorsome, and sweet. For best results, bream should be cleaned and scaled fresh and then kept cold until frying time. Cooked in good bacon grease or peanut oil, he's an unexcelled morsel.

While bluegills are taken with anything from garden hackle to catalpa worms they seem to prefer bugs of various types. Fly-casters, realizing the bream's craving for insects, take advantage of this fact and go "bugging" with artificials.

Almost any type of small popping bug will play havoc with bream. The best lures, however, seem to be small red and white poppers with a feathered tail.

A good pond, a rod or cane pole, and a nice mess of bream is all that these men need to spell "contentment."



Some fishermen swear by the white-legged rubber spider, and not a few catch fish on their favorite trout flies.

Cane pole fishing is popular with most people. It is inexpensive, easily obtainable, and takes beating around well. A whippy 8 or 10 foot pole is best with a gaudy bobber and a 3, 4, 5, or 6 Carlisle hook. Baited with worms they are sure meat getters.

For those with sportier tastes, there's the 3½ ounce split bamboo flyrod with delicate 4 to 6 pound test leader. A hefty bream on such light tackle will give a good account of himself.

The fact that the bream can be caught in so many ways makes it a favorite among average fishermen. While many game fish require elaborate and expensive fishing equipment, the bluegill bream will delight even the clumsiest fisherman by making a float go "plumb crazy."

Taking everything into consideration, the prolific bluegill is the "most concentrated package of fun in the entire fish family." So for some real fun the rest of the summer—take a jaunt after bluegill and come home with some scrappy fish instead of alibis.



U. S. Forest Service photo

FROM MY OFFICE WINDOW

By LLOYD W. SWIFT

FROM MY OFFICE window I can look into Court 2 of the South Agriculture Building in Washington, D. C. It is an unlovely place of cement, brick, and parked automobiles. There is

no plant life there, and no animal life, other than the morning and evening rush of time-conscious humanity. But this view does have some redeeming features in that it accentuates to me the value of

the outdoors. Moreover, it causes me to ponder on some of these values.

Although I may start with some angry thoughts on the view from my office window, I soon shift to pleasant reflections. Among other things, I attempt to reason why some people devote their lives to conservation work, and more particularly to the field of wildlife management.

I doubt that it is because of the salary, since that is comparatively of no great attraction; it couldn't be because of the working hours, for it is more than likely that in this work one will put in many hours of overtime; I doubt that it is because of the satisfied clientele, as sportsmen are seldom contented with the fish and game situation.

What, then, are the forces that attract able young public servants to wildlife work? And what's more, why do they stay in this type of conservation work? The reasons are no doubt several, but their importance would necessarily vary with the individuals concerned. It should be remembered, also, that my views are shaped by my own experiences and likes.

It is a dull person indeed who does not enjoy the obvious beauties and interests of the out-of-doors. This, no doubt, accounts for the millions who visit the national parks, the national forests, and the state parks. Everyone gets satisfaction from a waterfall in a forest setting, the autumnal colors, a flight of geese against the setting sun, or the song of a mockingbird. These things are enjoyed by all.

But being in a marsh, a field, or forest has special meaning to those who can read the signs of the land. To see tracks that most people miss, and to know the animals that make them; to hear sounds and identify them; to know the plants and their relationships to the soil, moisture, and past human and animal use of the land; to pick up a hickory nut shell and know by the gnawing marks whether it was opened by a gray or a flying squirrel—these are like pages in a book. They are part of a story, and one who knows the words may read on with eagerness and pleasure.

These natural signs may also be used as working tools. By interpretation they give a picture of the land capabilities. Such indicators provide basic considerations which enter into the development and use of the soil and the plants and animals which

grow upon it.

Many who are engaged in conservation work have been or could be successful in other occupations. But they have elected to forego higher incomes and so-called advantages of a city and office life in order to live and work in the outdoors. The reasons for this choice may be one or several, which may or may not be among those mentioned here. One strong, motivating force is to lead a more natural and healthful life. To these people the fresh air, the freedom from the rush and strain of urban life, and the privilege of completing a day's work in the outdoors is priceless. It means an evening of contentment, a comfortably tired body, and a sound, refreshing sleep. Thus, relaxed nerves and a happy man.

Wildlife conservationists necessarily work with the people who live on the land, and those who come out of the cities to be refreshed from the land. But in any case they must work with people. It follows that they should like people, and most of them do. After all, programs in forestry, soil conservation, and wildlife management normally succeed in proportion to their acceptance by the people. In these contacts there are many compensations. The pleasure of being with others, the many acquaintances and friendships contribute to a richer and fuller life.

A philosophy of public service is another force that shapes the lives of wildlife and other conservationists. If lacking, one's work in conservation is likely to be without purpose; but with it, the work with the land and its people becomes a way of life. Of course, these public service motives can be overdone and become obnoxious to others—but to me it appears to be a basic quality giving reason to one's work, and compensation in its doing.

The outdoors has a spiritual meaning too. Any-one who has been alone on a mountain top, or among the giant trees of an old forest, has sensed the spiritual values. Some have written about this reaction. This thought is expressed more than once in Justice William O. Douglas' new book "Of Men and Mountains."

What is this worth to men who work in the field of conservation? Apparently a great deal, as it is a value they cherish. Something that is personal, uplifting, and stabilizing.

"There is religion in everything around us—a calm and holy religion in the unbreathing things of nature, which man would do well to imitate."—Ruskin.

LET'S PUT THE EMPHASIS ON RESTORATION

(Continued from page 5)

The significant strides which already have been made are bringing notable results in increased game, and progress thus far during a very brief period is a practical guaranty that in a few more years the entire state will provide the necessary habitat for greater abundance of upland game.

The present aggressive effort depends very definitely on the desire of individual landowners to have more game on their places. *There can be no question that any farmer can have more game if he wants it and will treat his game as a product of his land.* Through various means, landowners are being urged to appreciate their game, and intensified efforts are being made to protect private posted lands from trespass hunting.

It already has been shown that the deer could be brought back to Virginia's mountains through release of brood stocks and adequate protection in those areas where there was plenty of natural browse. In wide expanses of this territory, a wild deer had not been seen for years. They had been exterminated 50 or more years ago.

Through restocking the many suitable unoccupied ranges for wild turkeys, it is confidently expected that after a few years the wild turkeys will

be as abundant as they once were in great stretches of country where not a single wild turkey remained. With the wild turkey the same is true as with other species: there is no use in trying to have them unless habitat to their liking is either already provided or is created.

Recent discoveries lend much hope to the problem of restoring the cattle territories as game-producing areas. It is found that such game as quail, rabbits, turkeys and deer are fond of ladino clover, a legume which is being widely planted for grazing purposes. It is confidently believed that intelligent land-use practices, including the planting of game foods in field borders, waste corners, and fence rows, will bring back upland hunting to cattle-raisers who put their guns away long ago because of scarcities of game.

Here again, the Commission leans heavily upon the individual farmer's desire to have more game on his place, and can give him every assurance that he can have game if he is willing to go to a little trouble to produce it. Scarcity of game on the stock farms has been a matter of deep concern, but there is cause for much hope of improvement through the intelligent development of means of restoring food and cover to land of all sorts.

While the cooperation of the individual farmer is of great importance, the restoration of game habi-

Good wildlife habitat—that is the key to more and better hunting in Virginia.

Game Commission photo by L. G. Kesteloo



tat is going ahead in a systematic way, even on the land of the man who does not care for his game. The movement ties in admirably with the work of other agencies which are striving diligently to bring back the soils and the timber.

The Commission of Game and Inland Fisheries is constantly enlarging its nurseries and providing more seed and slips of those plants which are most desirable both in modern farm improvement and in furnishing food and cover for game. These are provided free to owners of land who will use them, and the Soil Conservation Districts not only include them in their farm planning, but they and all individuals who are interested are given help by the game technicians and game wardens. No stone is left unturned in assisting wherever possible in bringing about a condition of affairs in which the whole state of Virginia will be producing more game through habitat improvement.

As far as the attitude of the general public is concerned, there has been a notable change of heart in recent years. No longer do men think of hunting, as they knew it in their boyhood, as a thing of the past. Pessimism is no longer evident on every hand, in view of the steadily mounting numbers of people who want to hunt. To the contrary, there

are growing evidences of optimism, for men know that there can be much more game down through the years if intelligent and aggressive efforts are continued.

Every thinking man is aware of the fact that the habitat for certain species of game which once existed in Virginia is gone for good. We would probably not want the buffaloes back, even if it were possible to bring them back. But there are many fine species of native game which are important. While their habitat has been impaired, the living conditions for such game have not been impaired beyond restoration.

It is increasingly evident that the lands, under present practices, in many cases simply do not supply enough food and cover for the existence of game. Such food and cover has got to be deliberately provided. It is by no means an impossible task. Many are of fixed belief that this is essential, even if game is to be maintained at present levels or prevented from disappearing almost to the vanishing point.

But the outlook of present game management is one of growing optimism. Opportunities are evident on every hand, such opportunities for vast game expansion as few of the other states are able to offer.

Lumberjacks of the Animal Kingdom

By "SCALLY" MAURICE

THE BEAVER is a funny little animal with a big flat tail and a terrible habit of eating himself into a home. He picks out a nice juicy tree and proceeds to cut it down. Sometimes he eats the bark and cambium on the bank, and at other times he cuts the tree into lengths that he can handle easily, pulls them into the water and, acting as a tug boat, either floats them to his storage pile or to his lodge.

The beaver lodge is made of mud, cat brier, bramble brier, and short lengths of timber from which the bark has been removed. Shopping, to him, is a pleasure as he brings home the bacon and part of the roof at the same time.

I was quite amused at one time to run across a farmer who wasn't cussing the beavers for cutting down his timber. He was glad to have them around. They dammed the creek on his place, and he had a pond which he could stock with fish. They were also a source of comfort to him since they cut his

winter wood—all he had to do was to go out and collect the logs for his fire! Some pieces were even cut to stove length!

If you have never seen nor heard beavers at work or play, then you surely have missed a lot. I've spent hours at twilight and after dark on the shores of a creek listening to them. It's fun, at dusk, to sit quietly and watch them as they emerge from the lodge. The mirror-like surface of the pond, afloat with all kinds of little leaf boats, is suddenly the center of a storm and the boats rock and bounce and some sink as the beavers come up from their underwater highway. Some head directly for duties and destinations unknown; others swim and dive all over the pond and then slap the water with their tails as if applauding themselves. Slowly, the darkness blots out the scene and then you can hear them swimming and climbing out on the bank.

Soon they are walking all around. You can hear

them gnawing on trees and dragging branches. They continue gnawing on all sides, and then, without warning, the crash of a falling tree makes you almost jump out of your skin! Once this happened so close I almost felt the rush of air. The woods were alive with the patter of feet, the dragging of tails, the gnawing, falling of chips, trees toppling and splashing into the water. It was a nightmare in disguise!

How these night time lumberjacks of the mammal kingdom do their logging at night and escape injury is marvelous. Since self-preservation is the first law of nature, I started to leave. The beam of my flashlight picked up the swaying brown bodies as they stopped operations "Woodchopper" and headed for deep water. Soon the water was literally boiling with them as they swam and smacked it with their tails. These smacks were louder than the playful slaps had been, and carried a warning that danger was at hand. Gradually the noise subsided as the beavers sank beneath the surface and swam to the safety of the lodge. Then all was still and quiet again.

Being a week-end naturalist, I have spent quite a bit of my time following the three beaver colonies that I know of in Chesterfield County. One of them is located in a swampy section of the county near the Appomattox River, and the beavers seem to take great pleasure in flooding the road. It's a sort of game of "Put and Take" between the beavers and the Highway Department—the beavers build a dam and flood the road, and the Highway Department has to take the dam down.

As for a preference of trees for food, Mr. Beaver seems to make few exceptions in this section—ironwood, beech, oak, dogwood, and holly have all fallen to the charm of his incisors. He does not seem to care too much for pine (maybe he doesn't like the resin taste), or for laurel and rhododendron.

In binding his timbers together for a lodge he uses cat brier, green brier, and bramble for twine. The largest tree that I have found cut down was three feet nine inches in circumference, and about eighteen inches from the ground, and it did not block the stream as intended.

After watching and studying the beaver for a number of years, there are still some things I have been unable to learn. First, just where does the beaver go when he takes his vacation? Every year in late summer and early fall they seem to completely disappear from their haunts. Absence of fallen trees, tracks, or new cuttings tells they have slipped away into the unknown. Then, in November, fresh chips, new stumps, and chopsticks show

that Mr. Beaver is back again on the job, preparing for the winter ahead. Just where did he go—to the mountains, the seashore, or into hibernation?

Is the beaver a slap-happy ruler or king? It was spring and the bushes and trees were just beginning to show signs of awakening from their long winter nap. It was an hour before twilight and all was quiet in the vicinity of the beaver lodge. Suddenly, the plate glass surface of the pool was smashed into a thousand ripples, as an average sized beaver broke the surface from his underwater highway. Around and around the lodge he swam and cavorted, slapping the water with his tail every so often. What a time he was having!

Then in the distance came the sound of a louder slap on the water. As this new sound floated in on the twilight breeze, the beaver swimming in the pool seemed to be alerted. Near and nearer came the loud, ringing slaps of the mysterious interloper. Now he was just around the bend in the creek.

The beaver in the pool around the lodge, still swimming in circles and slapping the water with his tail, slowly retreated down the creek. Then from around the bend and down the middle of the creek came the beaver dreadnaught, slapping the water a loud crack with his tail at almost timed intervals. He glided into the pool surrounding the lodge, cruising here and there, bashing the water terrific smashes and sending out a thousand little ripples.

From down the creek could be heard the medium sized beaver as he slapped his way into the night. Later the big beaver was joined in the pool by others from the lodge, and they swam and dived like porpoises at play. I left them to their fun. After reaching the car, I sat quietly for a few minutes and many thoughts ran through my mind. Deer, elk, and many other members of the animal kingdom have battled to the death for leadership in their respective groups—could it be that beavers did not fight for leadership, but on a quiet cool night, met and tail-slapped each other into oblivion? Or could there be some other meaning to all this noise at twilight?

I've been tempted once or twice to see if the beaver has a "sweet tooth" and just how good is his sense of smell. My idea would be to go back into the area where they do their logging, pick out certain trees, mark and girdle them about eighteen inches above the ground with molasses or honey, and then go back the next day to see if they picked these trees out of hundreds of others to cut down. Trying this for quite a few nights would give some slant as to whether the beavers could smell out the marked trees, and as to how sweet a tooth they have.

CONSERVATIONGRAM

Late Wildlife News . . . At A Glance

COMMISSION TO HOLD GAME WARDEN SCHOOL: I. T. Quinn, Commission executive director, says that plans are under way for a one week school program for the game wardens of the state at Virginia Polytechnic Institute this summer.

The Commission's program for the wardens will consist of discussions, lectures, instruction and demonstrations on the various techniques and problems of the Commission. Representatives of each of the Commission's five divisions will be on hand to aid in carrying out the program.

Instruction will consist of lectures on law enforcement techniques, first aid and life-saving demonstrations, map making, pistol instruction and firing, restocking and related problems, fish and game division problems, a discussion on the national forest program and our "Cooperative Farm Game" program, a lecture and discussion on the activities and problems of the education division, and a discussion of the latest wildlife research activities.

TROUT STREAMS IN GOOD SHAPE; FISHING IS GOOD: Just back from an extensive trip in southwest Virginia, J. J. Shomon, chief of the education division, reports that trout waters are low and clear and that fly fishing for brooks and rainbows is excellent.

Mr. Shomon reported that "in two days our party of three, fishing for a total of six hours caught 28 trout, two of which went over one pound apiece. The larger fish were stocked trout and the smaller ones were natives. All fish were taken on artificial lures, mostly wet and dry flies. The Royal Coachman and the Grey Hackle seemed most effective."

NEW GAME LAW LEAFLET BEING PUBLISHED: To facilitate answering the thousands of questions on game and fish law enforcement with which the Commission of Game and Inland Fisheries is annually swamped, the law enforcement division has compiled a new eight-page leaflet entitled "Tell Me, Warden . . . ?" designed to answer most of the common questions relating to game law enforcement in Virginia.

The attractive folder is the work of M. Wheeler Kesterson, chief of the law enforcement division, who together with Judge William S. Snow and other members of the Commission staff selected a series of questions and answers on hunting and fishing regulations most frequently asked by Virginians.

This folder is now rolling off the presses and will be available to anyone just for the asking. Fifty thousand copies of the leaflet are being printed, and will be given wide distribution through the Commission's law enforcement personnel and the county clerks' offices.

COMMISSION ADVISES, "BE FAIR TO YOUR DOG!": The time is close at hand when the Virginia nimrods will be heading out into the fields in hopes of bagging a quail, grouse, or rabbit. Close at their heels will be their favorite canines.

Let's be fair to our hunting hounds. Start them running now — that excess weight they put on during the past summer has made them slow and sluggish, and to take them out that first day without a previous workout just isn't fair.

CONNECTICUT ADOPTS MODEL BIRD LAW: Hawks and owls have lots of friends in Connecticut, the National Audubon Society reports.

That became apparent last month when Governor John Lodge signed a "model" bird protection bill which makes it unlawful to shoot any species of hawk or owl in the Nutmeg State.

The Society believes that the new law will be regarded as a model, "because it recognizes that the average person cannot distinguish among the various hawks and owls, and hence the statute protects them all, except that hawks may be taken when in the act of destroying poultry."

MORE REVENUE FOR FEDERAL AID TO STATE FISHERIES: The excise tax on sport fishing tackle has been hiked from ten per cent to fifteen per cent, reports the National Wildlife Federation. This tax is earmarked by the Dingell-Johnson Act for federal aid to state fishery restoration projects. Up to June 1 of this year this tax amounted to about \$2,500,000 on the basis of the ten per cent tax. When the new revenue bill is passed and becomes a law the tax revenues thereafter will be fifty per cent higher because the increase of five per cent in the tax base will bring in half again as much as at the present time. The bill, however, has yet to run the gauntlet of the Senate Finance Committee and the Senate itself and probably will not go into effect until late in the fall.



Upper Left: Commission game warden Ed Doughty and federal game management agent James S. Williams check over map before starting their shore patrol.

Upper Right: The wardens stop to observe noisy and careening laughing gulls overhead.

In the marshes several tern nests are looked over closely.



Laughing gull on her nest. Note blotched egg.



Nest of clapper rail. Note protective grasses arching overhead. Inspection revealed numerous rail and gull nests "washed out" by high tides. Birds began re-nesting.

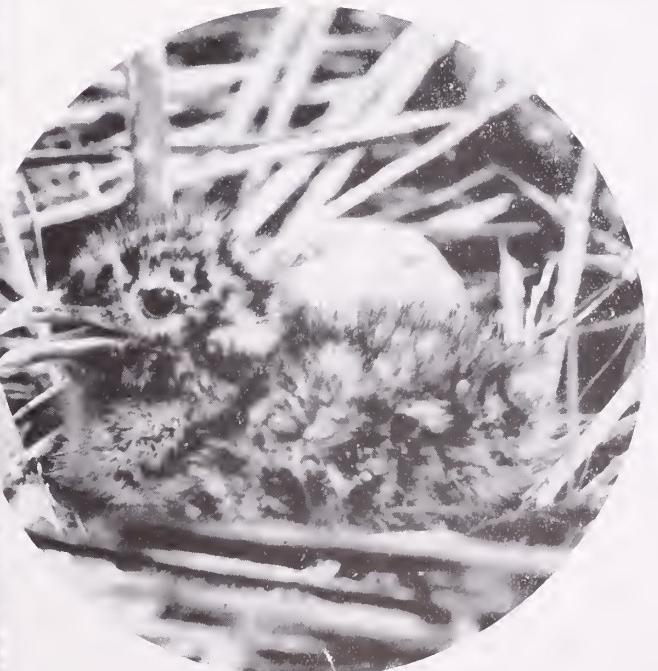
(Game Commission photos by L. G. Kesteloo)



Black skimmer nest is built on the sand.



A tern nest with four eggs is a simple structure.



Day-old laughing gull.

HAWFIELD

Here—on the Commission's new field demonstration area—in Orange County is proof positive that wildlife can be restored to idle acres.



—Paragon of Game Management

By WILLIAM P. BLACKWELL

(Game Commission photos by L. G. Kesteloo)

MUCH INTEREST has been manifested in the development of the Hawfield Demonstration and Experiment Area in Orange County. This farm was acquired by the Commission of Game and Inland Fisheries through federal aid of the Pittman Robertson Projects in July, 1949. Since that time it has been operated as a demonstration and experimental area for creating, applying, and observing techniques of value in increasing game on farm land typical of that section of Virginia.

Developmental work for the benefit of deer, turkey, and grouse in mountainous terrain is also being done on the two national forests in Virginia, and on deer and turkey under Piedmont conditions on the three state forests. In addition, experimental and observational work is being done on waterfowl and muskrats at Hog Island, and on upland game at Hawfield. With the acquisition of these two areas, and the cooperative projects with the state and national forest services, the Game Commission now has areas on which intensive work can be done to study and improve conditions for all major game species indigenous to the state.

In order to better understand just what preceded the Game Commission's acquisition of Hawfield, a brief history is in order. About 1840, Captain William Crenshaw began to buy farms adjoining his own as they became available. By 1877, he owned approximately 3,300 acres. He was a highly successful farmer in this county, and by 1890 Hawfield was a show place in this section of the state. In addition to being a leading producer and trader in beef cattle, Captain Crenshaw was one of the first men in this section to produce 10,000 bushels of grain in one year.

According to eyewitnesses, Hawfield in the late 1890's was the acme of perfection in farming, due in no small part to the fact that its owner was a director in the Virginia-Carolina Chemical Company, an early producer of chemical fertilizer. Fertilizer was extravagantly used on Hawfield

to achieve maximum yields from both pasture and crop land.

After Captain Crenshaw's death in 1897 the farm reached a turning point, and began to slip slowly backward between 1900 and 1920. At that time, the descendants of Captain Crenshaw living at Hawfield had largely lost their interest in farming, and had leased a large part of their acreage to share croppers.

During the period 1920 to 1945, little or no attention was paid to the land, and it was mined for all it would produce without returning any substance to the soil. Fertility played out and when the share croppers could grow no more than nubbins of corn, they too abandoned Hawfield, and it rapidly reverted to broomsedge, pines, and cedars. Gullies and galls started on the steeper fields, and by 1945 a once fertile and productive 3,300-acre farm lay in utter ruin, grown up in brush and washing away down the creeks.

In 1945 this farm was bought by John S. Rixey, who intended to rebuild it as a stock farm. Before Mr. Rixey had made much headway in his reclamation project, Hawfield was bought by the Game Commission, in 1949. Prior to 1945, approximately 530 acres were sold, or given to faithful servants of the Crenshaw family, thus reducing its acreage to 2,764.2 acres.

One of the first things that was done after this tract was purchased was to census it as thoroughly as possible with bird dogs. At that time, (fall of 1949) only 15 conveys of quail were located on the approximately 1,600 acres of land that had been, at one time, open and cultivated. It might be added that these fields were so grown up with cedars, pines, briars, and underbrush that keeping up with bird dogs and thoroughly covering the 1,600 acres was a difficult task.

Due to the overgrown condition of the farm one of the first necessities was to clear enough land to make the whole farm accessible, at least with



Bill Blackwell, Commission's biologist at Hawfield, points out on aerial photo map the sections where habitat improvement work is being done.

farm machinery. Realizing that farm game species are a by-product of agriculture, it was deemed wise to plant crops on at least a portion of all fields which were still open enough to be farmed. This was aimed at providing food for game on this large tract where there was an over-abundance of cover and a scarcity of food, and also to prevent the open land from reverting to brush.

In the fall of 1949, 150 acres of wheat were planted. This wheat was seeded with lespedeza the following winter, thus providing food and cover for game.

During the first winter bulldozers were rented, which cleared an additional 250 to 300 acres. This clearing was not done all in one place, but was scattered over the whole farm, with some clearing work being done in each field. At this time a road was roughed in with a bulldozer from one end of the farm to the other, and six bridges were built over streams which had to be crossed. This clearing made it possible to get over the entire farm with machinery. A March census showed 16 coveys of quail still on the farm. Food patches were planted over the entire farm during this spring.

Bicolor lespedeza growing at Hawfield. Some 200,000 plants, of various strains, have been set out on the Commission-owned area.

In the spring of 1950 approximately 50,000 plants of seven experimental strains of shrub lespedeza were set out. This was done in cooperation with the Sandy Level Soil Conservation Service nursery at Gretna, Virginia. The purpose of this project was to develop strains of shrub lespedeza which seed earlier than common bicolor, so that a suitable plant could be selected for use west of the Blue Ridge. During this present spring of 1951, 150,000 plants of improved selections were planted. These were planted in seed blocks and as borders, so that seed might be combined and distributed to all parts of the state. Seed blocks of serecia lespedeza, Kentucky 31 fescue, and clovers were also planted. These blocks will furnish seed needed for sowing newly cleared land at Hawfield, and also will supply the farm game project with seed which will be provided landowners to plant for game.

A number of demonstrations have been planted, and others are still in the planning stage. One problem in northern and southwest Virginia is the severe competition that exists between cattle and game in areas where grazing is the principal form of agriculture. If some technique for restoring

game in these areas is not perfected there will be large sections of the state which will support practically no game.

With this in mind, one field which will eventually be grazed was planted as an experimental area for multiflora rose. In this field of approximately 250 acres, 45,000 rose bushes were planted which will develop into a cattleproof fence. These rose fences were planted 20 feet inside the wire fences, and the areas between the roses and the wire fences were planted with blocks of bicolor lespedeza, serecia lespedeza, and a mixture of Kentucky 31 and ladino clover. These three blocks will furnish food, protective cover, and undisturbed nesting cover. The grass and clover will also provide winter green food for all forms of wildlife. All the plantings will be protected from grazing by the rose fences, which in years to come will provide escape cover for game in its mass of thorny branches.

The value of this demonstration cannot be known for some years, until it can be determined how many birds can be produced and held per mile of strip in this field. If it will produce only one

or two coveys per mile it will be of little value, but if it will produce 6 to 10 coveys per mile there will be a lot of farmers who will adopt this method on their farms.

Another problem in the northern section of the state is how to improve conditions for game in larger crop fields (100 acres or more.) With the increase in contour farming small fields are being eliminated. Three or four small fields with their grownup fence rows are being thrown into one large field, thus eliminating valuable cover for game. At Hawfield a narrow strip of serecia lespedeza has been planted between each contour strip, in an effort to encourage game to use more of the area toward the middle of the field. Again, it is too early to evaluate this experiment.

Demonstrations of woods borders and field borders have been planted, using both annuals and perennials. A demonstration of possible treatments of a pipe line or power line has been planned, but at this date has not been carried out. These plantings will be threefold in purpose: first, to cut down or eliminate erosion on these lines; second, to reduce

(Continued on page 22)

The Hawfield experiment is designed to show how wildlife can be rehabilitated on an area with modern land management methods.



TVA's first lake in the State of Virginia became a reality last January when the rising waters behind South Holston Dam reached and passed the Tennessee-Virginia state line. At normal levels the 24-mile lake extends back more than ten miles into Washington County, Virginia, providing a rugged shoreline of 187 miles with an unusually scenic setting.

With completion of the dam new TVA activities are being introduced to those Virginians who live on the wooded slopes, rolling pasture lands and fertile bottoms of the state's nine Tennessee Valley counties. Long familiar with TVA's conservation work as active participants in cooperative programs for the development of the area's farms, forests, and mineral resources, they can now look forward to new scenic and recreational opportunities.

In its widest part (a short distance above the dam) the lake is a little over 1½ miles from shore to shore. The widest portion in Virginia is about one mile. On the right bank of the reservoir the Great Knobs extend from near Bristol to Abingdon, and on the southeast are the foothills of Holston Mountain.

The whole lake covers an area of about 8,000 acres, and drains an area of approximately 703 square miles in Tennessee and Virginia. The shoreline totals 160 miles, with islands in the lake adding about eight miles.

South Holston Lake is an attractive addition to the recreation facilities of the area, although operation of the dam and reservoir in the interest of flood

SOUTH HOLSTON LAKE

By WILLIAM A. SHAFER and C. J. CHANCE

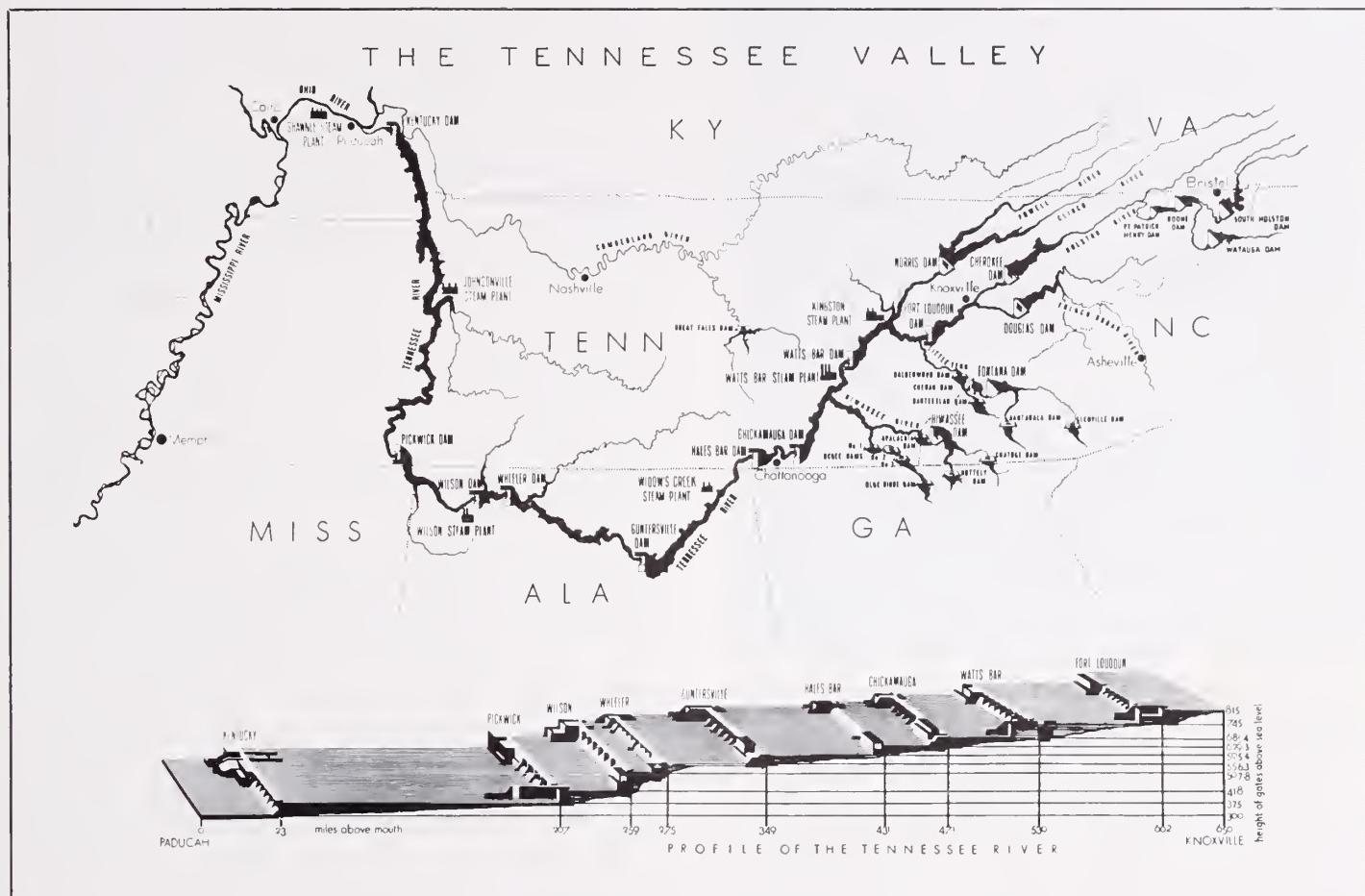
(TVA photos)

control and power production does present certain disadvantages to recreation. A heavy drawdown must occur every year, and in dry years the water may remain considerably below the normal operating level.

Fortunately, however, the principal drawdowns occur in the fall and early winter when fishing and other recreation activities are at their lowest ebb and when tourist travel is at a minimum. Floating equipment can aid in minimizing the inconvenience occasioned by the fluctuating water levels.

SOUTH HOLSTON DAM AND LAKE. View shows TVA's latest lake which, when filled, will back water some ten miles in Washington County, Virginia.





TENNESSEE RIVER SYSTEM. This map of the Tennessee River and its tributaries shows the location of the various TVA dams, steam plants, and the lakes.

The dam itself rises 285 feet above the bed of the South Fork Holston River and stretches 1,600 feet between the bluffs. An earth and rock fill dam, this structure is a multiple-purpose project, as are most of the dams in TVA's 28-dam unified system.

Designed to aid in flood control and navigation as well as power production, it is equipped with one generating unit of 35,000 kw capacity, and will add 51,000 kw of continuous power to the TVA system—a system which now produces more than 17 billion kilowatt-hours annually.

The reservoir has a total storage capacity of 783,000 acre-feet, of which 660,000 acre-feet is flood storage. If the severe flood of 1901 on this stream were to recur today (and there were no dams) it would do about \$1,165,000 damage at Kingsport, Tennessee. This project, along with Watauga Dam, now controls the flow so that there would be no substantial damage at Kingsport. Damage to the agricultural lands, highways and railroads along the rivers would be greatly reduced.

Among outdoor enthusiasts, the possibilities for fishermen in the new lake undoubtedly attract the widest attention. Although this body of water, as well as any other, will not provide an unlimited

amount of fishing, it certainly will provide a lot. The size of the reservoir itself and the natural productivity of the water are eventually to be the limiting factors.

From observations on other TVA reservoirs and other newly impounded waters a general forecast for South Holston Reservoir is that fishing will open with a bang! Why? Almost any new impoundment, as far as fish production is concerned, might be compared to farming newly cleared land. The productive level of newly cleared land is abnormally high for the first few years because of the abundance of organic matter, excellent physical condition of the soil, available plant nutrients, etc.

In impounded waters a wealth of organic material is inundated, such as grass, leaves, remnants of agricultural crops, brush, etc. These materials, upon decay and disintegration, provide an exceptionally rich medium for a brand-new, expanding fish population. Under such ideal conditions—plenty of food and no competition—the original river population reproduces. Survival of young is high, they grow prodigiously, and thus is born an ideal fishing situation. Later, usually within 3-5 years, this "souped-up" condition begins to wane,



Bass and crappie taken from a TVA lake. Virginians are hopeful that South Holston Lake will be a boom to fishing in the southwest section of the state.

fishermen begin to gripe and are required to use their fishing ability to catch fish. What has happened is that the fish production level of the body of water has declined to its normal, inherent level or capacity to produce fish, experts say. At the normal carrying capacity fishing is expected to continue to be good but it likely will not approach the early impoundment years.

A pre-impoundment collection of fishes on South Holston River resulted in: 6 species of suckers and redhorses; 19 species of minnows; 2 species of catfish; 11 species of perches, all darters; 4 species of sunfishes, including smallmouth bass, warmouth, bluegill, and rock bass; one species of muddler or miller's thumb. Many of these fishes will likely not survive reservoir conditions, particularly the minnows and darters which are stream adapted. The sunfishes, of course, are well fitted for reservoir existence and will provide most of the fishing. One important game species suspected of being present but not collected is the walleye. In fact, the list may be incomplete for other groups, but the species of most interest to fishermen in this region are represented in the collection.

PARAGON OF GAME MANAGEMENT

(Continued from page 19)

the cost of maintenance; and third, to increase the wildlife species present in the area of these cleared rights of way.

At present, power companies are compelled to spend a large amount of money to periodically disc, spray, or clear by chopping, brush and saplings from their rights of way. If the value of these plantings could be demonstrated to the power and pipe line companies it is possible that they would undertake plantings of value to wildlife as a part of their construction and maintenance program. Plantings on these lines are made not only for the benefit of quail and rabbits, but also for deer and turkey.

New plants of possible value to wildlife are being tested and evaluated according to their practicability. This year two plants are being tried: pokeweed, of principal value to doves, and trifoliate orange, of possible value as a living fence.

Hawfield is fast becoming a testing ground or experiment station for developing new techniques of value to wildlife. Every effort is being made to keep these improvements practical so that they can be incorporated into any farm program.

Another experiment is that of burning as a method of inexpensive cover control. To date burning has proved helpful in thinning dense stands of cedar, but the problem remains of what to do following a burn to prevent the area from returning to brush.

In addition to the above, Hawfield is being used by a number of field trial clubs as grounds for running bird dog field trials. The area is available to clubs from October 1 to March 31 of each year. To date no hound club has had a trial on this area, although it is available to them. Field trial clubs have converted an old cow barn into a stable for 27 horses, and have constructed an excellent kennel. A Grange Hall has been built by the Hawfield Grange with the financial assistance of the Virginia Amateur Field Trial Association. This Grange Hall is used as a club house during field trials, and excellent noon meals have been served by the ladies of the Grange.

In the future, fields at Hawfield will be leased for crops under rigid specifications, using the most up-to-date recommendations of the Soil Conservation Service. By so doing the Commission will be relieved of the work involved in planting and harvesting the usual farm crops. All emphasis will then be given to improving food and cover conditions for game, producing seed used in our farm game program throughout the state, and experimenting with new plants and techniques which will expand and improve our farm game program in Virginia.



Rabbit Fights off Crows but Loses to Skunk

Nature is clever, but also cruel. As an example of the endless struggle with which our wildlife is constantly faced, we offer the following field force note by William P. Blackwell, witnessed by himself and Fletcher Taylor, Lewis Blankenship, and Frank Blankenship.

Mr. Blackwell says that an area of about one-half acre, seeded in clover, had a telephone pole in the center of it, which had a small plot of grass around it. The rest of the field was perfectly bare and clean, since the clover had not yet germinated.

In the small plot of grass at the base of the pole a rabbit had built a nest, and there were four young rabbits in it. Crows had discovered the nest, and were trying to break it up. The crows would come in, one at a time, and light about 30 feet from the pole. At this point the mother rabbit would run out from a nearby fence row and sit between the crow and her nest. When the crow would make any move to approach the pole, the mother rabbit would run at the crow and cause it to fly, then she would chase it for about 50 yards and return to stand guard in the fence row. This happened at least six times, as the men watched.

The witnesses to this little byplay placed a number of large stones over the nest, so the rabbit could enter but the crows could not. However, this measure of safety proved futile, because two nights later a skunk dug into the nest, and destroyed the young rabbits.

Bear Tree Gap Club Active

Word comes from the president of the Bear Tree Gap Rod and Gun Club, Damascus, Virginia, that wildlife appears to be making a notable comeback in and around Damascus, in Washington County. H. R. Shepherd, president of the club, writes in that the club has leased 2,000 acres of land in the county, and that much effort is being directed by the club at wildlife restoration. He says the deer are making a spectacular comeback. On one occasion 36 white-tail deer were counted in one grove.

"The grouse are plentiful," said the president, "and the beaver are all over the place." He says that the club has a limited number of vacancies for good sportsmen who wish to join an active organization and do something constructive for wildlife conservation.

Fish Gets Away from Bird— but not from Dove

Conservation officer T. J. Starrett sends this note to us about an osprey: "Roy Dove saw a fish hawk dive into the north fork of the Shenandoah and reappear with a 16-inch sucker in its claws.

"The fish wriggled loose and dropped into the road just ahead of Dove.

"There followed a race between Dove and the hawk. Dove had a fish supper; the hawk went hungry."

Piedmont District Leads in Subscriptions

According to records compiled by Mrs. Florence McDaniel, chief of the circulation and distribution section, Piedmont District led in the current subscription drive, with a total of 188 subscriptions sold. The Southwest District sent in a total of 166 subscriptions, with Otto D. Kendrick as leading salesman with 42. A grand total of 395 subscriptions has been sent in by wardens from the entire state.

Food for Wildlife

A note comes from James O. Campbell, president of the Outdoorsman Rod and Gun Clnb, that the club has gone in for habitat improvement work in a big way.

The club collectively has seeded large areas to milo maize and other bird foods. The food patches, according to Campbell, have pulled many birds through the critical months of last winter. He sends along a photo to prove his point.

Food for wildlife. Plantings like these will mean much for wildlife when food is scarce.



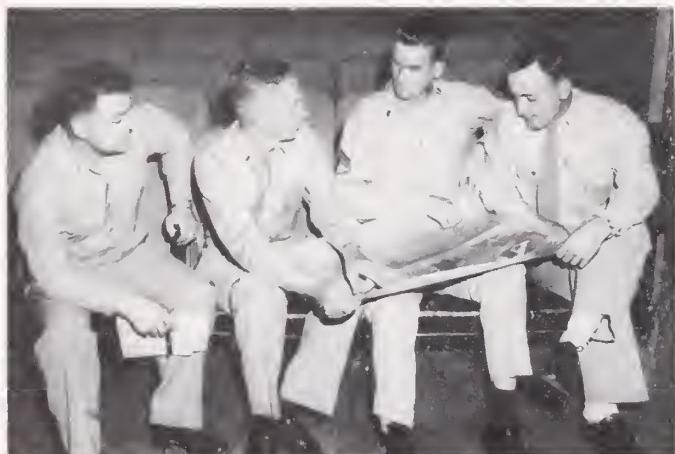
Marine Club Active in Wildlife

The Commission is in receipt of a communication from 1st Lt. A. C. McLean, of the U. S. Marine Corps Forwarding Depot, Portsmouth, Virginia, vice-president of the Marford Rod and Gun Club of Nansemond County, telling of the excellent wildlife restoration program of the club.

Lt. McLean states that they have 1,000 acres at the Depot with wonderful upland game and migratory waterfowl habitat. The club has planted 21 food patches and has been working very closely with George Gehrken, game technician, and game warden W. S. Ronntree in its wildlife work.

"One of our first special events," says Lt. McLean, "is a fox drive in the area, as we have an overabundance of them." This is being organized by Mr. Charles D. Andrews of Suffolk.

The club, only recently organized, is heartily endorsed by the Commanding Officer, Colonel H. C. Cooper, who is also a very active member.



The accompanying photograph shows the recently elected Marford Rod and Gun Club officers. They are, reading from left to right: Commissioned Warrant Officer S. L. Brogli, Secretary-treasurer; 1st Lt. A. C. McLean, Vice-president; Staff Sergeant R. J. Alexander, President; and 1st Lt. J. D. Feltman, Field Manager.

League Chapter Issues Courtesy Cards

The Alexandria Chapter of the Izaak Walton League is giving courtesy cards to property owners upon whose lands their members are given permission to hunt or fish.

The thought behind this card is to assist in promoting better relations between the sportsmen and the landowners.

The card thanks the landowner for giving the member permission to hunt or fish on his property, and in turn is assured of gentlemanly conduct of the member while on his premises. The card also invites the landowner to visit the chapter as guest of the permittee.

Skunk Family Stops Traffic

An interesting note comes from Miss Mary B. Sadler of Buckingham, Virginia, who tells of an incident on the highway near Richmond. A bus driver and ten patrons were held up for 15 minutes while a mother skunk and her eleven baby offspring enjoyed a playful road-crossing.

According to Miss Sadler there were no camera fans aboard the bus, but everyone was carried away with the procession. The bus driver described the skunks as being scuttled and bounded around playfully as their mother tried to herd them safely to the other side, not a bit concerned as to the traffic congestion she was causing.

The incident is interesting because a conscientious bus driver had some respect for the wildlife of our woods—as well as for his bus. Coming at a time when there is a campaign to "put on the brakes for wildlife" we are glad to know that the educational campaign is having some effect, at least.

Casting Demonstration in Richmond

The National Casting Club of Washington, D. C., recently put on quite a program of bait and fly casting in Richmond in an effort to get interest stirred up locally in sports events of this nature.

Mr. and Mrs. Ed Mulcahy of Richmond, long interested in activities of this kind, made the arrangements to get the Washington group to come to Byrd Park in Richmond to put on the demonstration.

Considerable interest was shown in the event by local fishermen and plans are under way to form such a club in the city.

Those who might be interested in this club or in the formation of other clubs in their own communities are urged to communicate with Mr. and Mrs. Ed Mulcahy whose address is 2419 Wedgewood Avenue, Richmond, Virginia.

AUGUST AUTHORS

I. T. QUINN is executive director of the Virginia Commission of Game and Inland Fisheries.

DR. E. C. NETTLES in "Bream—Prince of Panfish," is a member of the Game Commission from Wakefield, Va.

LLOYD W. SWIFT, who longs for the open spaces in "From My Office Window," is chief of the wildlife management division for the U. S. Forest Service in Washington.

MR. "SCALLY" MAURICE is engineer with the State Highway Department, and a photographer and naturalist.

The story of "Hawfield" is by our district game technician from Orange, WILLIAM P. BLACKWELL.

MESSRS. SHAFFER and CHANCE are staff members of the Tennessee Valley Authority.



COMMISSION ADDS SEVERAL SPECIALISTS

Two unfilled key vacancies in the Commission's education division and one position in the fish division were filled last month, according to executive director I. T. Quinn.

Robert E. Merritt, 26, Cornell graduate in conservation, has filled the position of special services officer formerly held by Philip R. Collins, who was recalled to the armed services. Merritt is doing wildlife educational work with schools and clubs and will assist at teaching at various summer camps.

Robert R. Bowers, 24, of Morgantown, West Virginia, and graduate of the University of Michigan, replaces R. T. Speers, former associate editor of *Virginia Wildlife*. Speers resigned May 31 to accept the position of chief of the game division for the Maine Game Department.

Bob Martin, who received his M. A. degree in field zoology from the University of Missouri in June, 1951, joined the fish division of the Commission of Game and Inland Fisheries on July 1, 1951, to work as a fish technician in Virginia.

WATERFOWL OUTLOOK

Latest reports from the Fish and Wildlife Service are optimistic concerning central Canadian waterfowl brood prospects for this year, due to the better than normal precipitation in this area. If favorable conditions continue to prevail, the waterfowl shooting on the Missis-

sippi flyway and on the Atlantic flyway should be exceptionally good this fall.

A gloomier picture was projected from North and South Dakota and Nebraska. Aerial and ground reports there showed a decrease in both water areas and ducks so far this year.

DON'T DISTURB YOUNG WILDLIFE

This warning may be coming a little late in the season, but it is still good advice.



Wildlife enthusiasts, particularly children, should avoid disturbing nesting birds and animals, as so often the parents will desert the young in the process. There are some exceptions, however, in which wildlife may be observed and photographed, *but not handled*. The picture above illustrates what we mean. These downy chuck-wills were photographed by L. G. Kesteloo, Commission photographer, without disturbing the young in any way.

QUOTE OF THE MONTH

"A nation with a growing population and the task of selling its philosophy of free enterprise to the rest of the world cannot afford to eat at the expense of its soil. Mere soil conservation is not enough for America. We must actually increase the productivity of our land." —H. E. Babcock.

Often we may run across what seems to be deserted wildlife. Leave them undisturbed, for you can be sure their parents are not far away; in fact, most likely they are watching you from the cover of the bushes close by.

"These animals should be left in the woods where they belong," warns Ned Thornton, assistant chief of the Commission's game division. "It is against the law to do otherwise, and good sportsmen and conservation-minded individuals will leave them there so that they may furnish sport and pleasure to all."

DESERT GAME BIRDS TO BE IMPORTED

The Fish and Wildlife Service will begin the importation of 4 species of desert-bred game birds from the Middle East in the near future.

The species selected to be trapped and imported to the United States are the elmkar partridge, an ideal hunting bird because of its fast flight; Oriental sand grouse, related to the pigeon family; sand partridge, or seesee, a bird similar to our quail in size and the best eating of the four; and the black partridge, a beautiful bird, sporting a silky black breast spotted with dashes of white.

In charge of the importation of these birds will be the Fish and Wildlife Service's foreign game bird specialist, Dr. Gardner Bump. Dr. Bump will be assisted by James Cox, a state biologist of New Mexico.



for
Students

Teachers

Parents

Book Review

AUDUBON WATER BIRD GUIDE. by Richard H. Pough, published by Doubleday & Co., Inc. 353 pp. 623 illustrations of 258 species.

Excellent and authoritative guide to the water, game, and large land birds of eastern and central North America from southern Texas to central Greenland, most of which range to the Pacific Coast.

Text covers significant points on identification, range, mating habits, etc. Color plates are good, clear, and bear page numbers when described.

A good investment for any bird student.

BIRD OF THE MONTH

Brown Thrasher

Why not the brown thrasher as the bird of the month? Somehow he seems to have poor standing in the minds of many. We wonder if this is not due partly to his wicked-looking yellow eye. Add to this a long curved bill. He has a quarrelsome note, and he is a real fighter if you trouble his nest.

But the brown thrasher has many things to be said in his favor. Certainly he comes from a fine family. His near cousins are the mockingbird and the catbird. Some folk call him the "brown thrush," but he is not kin to a thrush.

He is beautiful to look at. A little larger than the mockingbird, rufous above, light underneath with chains of brown spots, and a long, flowing tail.

He has the singing ability characteristic of his family, the *Mimidae*. While the mockingbird will repeat a note or a phrase six or eight times, the thrasher limits himself to two or three times. It is said that the thrasher seldom really mimics, but a fine-singing thrasher has a depth to his tones that even the mockingbird may envy. Unfortunately his season of song is short.

The brown thrasher breeds throughout the eastern half of the United States, from southern Florida on into southern Canada. A few individuals are to be found in eastern Virginia all winter, but the great part of our thrashers winter in the southern states.

A bird valuable to have around, he eats an amazing list of bugs and beetles and insects. Incidentally he is very fond of berries. Indulge him; he is your friend.

—Rev. W. B. McIlwaine

Wildlife Ramblings

THIS month we are beginning an added feature in our School Page—bits of wildlife lore that come to our attention from time to time.

We hope that you will like this section, and that you—all of you readers—



"I don't give a hoot who knows it. I'm scared of the dark!"

will favor us with bits of outdoor news regularly. We'll use it.

This month, let's talk about August offerings—the mushrooms and other fleshy fungi that cover the fields and woods after every rain.

People who know mushrooms will have a gay time picking them, for they

make delicious eating. In these days of inflated prices the food bill is a real problem. Those who can add to their family storehouse by picking the edible mushrooms are lucky indeed.

Believe it or not, it is possible to pick many pounds of delectable food any morning following a rain, by just knowing what mushrooms to pick. But that's the catch. To those who are unfamiliar with fungi, our advice is LEAVE THEM ALONE.

The best fungi to pick are the certain four—the puffballs, the morels, the sulphur shelf mushrooms, and the shaggymanes. All four are delicious, easily recognizable, and common. Space, however, does not permit us to describe them. Any good mushroom guide book will give you this information.

In studying mushrooms, the best advice we can give is, first go out into the field with someone who really knows the fungi. Much can be learned from books, but only by direct observation will a person be able to positively identify this interesting tribe.

Most people are afraid of mushrooms because a number are deadly. Yet the poisonous species can be identified with study. One common genus which is dangerous is the *Amanita* group. These can be identified by the presence of a ring around the stalk and a cup at the base of the stem. Extreme caution is a good thing, but it is silly to carry it too far. Only by learning more about these colorful and interesting ASCOMYCETES—as botanists call them—will our fear of them vanish.

* * *

The barn or screech owl is often called "the feathered cat" because it is a great foe to mice.

* * *

The black bear has the peculiar habit of treading in the same path, which becomes in time an easily recognizable trail, often leading to its destruction.

WASTE MEANS POVERTY

AMERICANS take pride in the fact that they have built a great nation in record time. This has been accomplished, however, only because this land was abundantly endowed with natural resources that could be developed and utilized. Each new generation could look to new and undeveloped lands and resources as a certain source of exploitation, but we are now approaching the end of such possibilities.

New land that can be cultivated is limited to that which can be irrigated by the limited water supplies available in western states. The mineral resources on which much of our industry is based are limited and the end of some already seems in sight. Our forest resources have been and are still being depleted at a much faster rate than the annual regrowth. In other words, we now face the necessity of more efficient management with less of the appalling waste of such resources as still remain.

Europeans have learned some of the answers and today, after thousands of years of use, their lands and forests are in comparatively better shape than ours. Complete utilization of forests and forest products can be seen in Europe rather than in the United States. We still waste enough despite the vaunted efficiency of our industrial processes to supply many needs. We are still pouring our soil into the sea at an unprecedented rate although Europe has long since learned how to prevent and control excessive erosion. We, too, must learn these lessons.

America is still relatively wealthy in natural resources. To the extent that she applies better management and better utilization, we can still remain a great nation. If we do not, despite the vast expanses of our territory included in our boundaries, this nation will sink to the status of a second-class power with worn out soils, vanished resources, and a poverty stricken population. It will come with continued waste just as certainly as it came to China's eroded hills and to the barren and desolute stretches that were once the productive lands of Asia Minor.

The continual growth of human population in this country is forcing us to focus more attention on conservation problems as human utilization of land and water becomes more intensive. These problems of the management of all resources will be of increasing concern to each generation until every American is consciously aware of his intimate relationship to and vital dependence on the natural resources.

—Dr. Ira N. Gabrielson
President, Wildlife Management Institute

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